

## REMARKS

### ***Allowable Subject Matter – Claims 7 and 10-15***

Applicants thank the Examiner for finding allowable subject matter in Claims 8, 9, 14, 15.

To this end, the allowable subject matter of claims 8-9 has been introduced into independent claim 7 from which claims 8 and 9 depended; claims 8 and 9 have been canceled, without prejudice; claims 14 and 15 which themselves contain allowable subject matter now depend on claim 7 which should be allowable as it incorporates the allowable subject matter of claims 8 and 9. Thereby, Claims 10, 11, 12 and 13 also depend on an allowable claim, so that independent claim 7 and its dependent claims 10 thru 15 are in condition for allowance.

Care has been taken not to introduce any new matter.

**Claims 1-6 Are Not Obvious Over 35 U.S.C. 103**

Claims 1-7, 10-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Belmar, et al., (WO 99/65328) in view of Mersfelder, et al., (4,547,375). Claims 7 and 10-13 have been rewritten in allowable form, as discussed above. The rejection of the remaining claims 1-6, directed to a process of thickening, is therefore addressed below.

Independent claim 1 is directed to:

A process for thickening a liquid or pourable product comprising the steps of

- i) preparing a first and a second portion of one or more PME-comprising fruits or vegetables;
- ii) PME-deactivating the first portion;
- iii) combining the first and the second portion in a weight ratio of 1:9 to 9:1 to form a fruit or vegetable mixture;
- iv) incorporating the fruit or vegetable mixture in the product to be thickened,

wherein the fruits or vegetables are comminuted at one or more of steps i)-iii), and wherein the fruits are selected from bananas, apples, oranges, pineapples, edible berries, cherries or mixtures thereof and wherein the vegetables are selected from the group consisting of root vegetables, stem vegetables, leafstalk vegetables, bulb vegetables, immature flower vegetables, leaf vegetables, tuber vegetables, bud vegetables seed vegetables and mixtures thereof.

Surprisingly, the addition of the claimed mixture to liquid or pourable products shows a strong thickening effect, whereas the addition of vegetables/fruits that are either PME-deactivated or non-PME-deactivated shows no or a much weaker thickening effect. (Note, tomatoes and peppers are referred to in the Specification at page 6 as fruits, and are not suitable according to the invention.) The thickening effect of PME-deactivated/non-PME deactivated vegetable or fruit mixtures can be obtained without

using costly pressure or high-pressure homogenization treatment. See Specification at p. 2. Further, the terminology used in independent claim 1 may be found in the Specification at p. 3, lines 4-24. Additionally, the present invention provides an alternative, improved, and cheap and/or easy process for thickening products which partially or completely replaces the need to use other thickeners such as starches or gums.

According to the Office Action, Belmar, et al., disclose a thickening agent and product thereof used for thickening foodstuffs (abstract and page 7, lines 10-20; page 8, lines 1-8; page 11, lines 9-24; page 12, lines 1-15).; The homogenized carrots are considered to be the PME deactivated first portion. Without explanation how, the Office Action concludes that the ratio falls within the claimed amounts as in claims 1 and 2. To cure the deficiencies of Belmar et al., Mersfelder, et al., is cited as disclosing that PME must be deactivated in tomatoes or else the product will be of low consistency, i.e., thin and watery (col. 1, lines 12-23).; Therefore, it would have been obvious to use known ingredient such as carrots and add tomatoes to make the claimed product in the claimed ratio.

Further according to the Office Action, Claim 3 further requires that the portions are from the same vegetable or fruit species. ; However, as it is known to deactivate one portion and use another portion contains PME, it would have been within the skill of the ordinary worker to use fruits or vegetables which would be suitable to make the claimed product.

Further according to the Office Action, Claim 4 further requires that the PME deactivation step is carried out by a hot break process. ; Such a process is so well known in tomato processing that it hardly needs a reference.; Therefore, it would have been obvious to make a composition containing the tomatoes from a hot break process.

Further according to the Office Action, Claim 5 further requires that the fruit or vegetable mixture is incorporated in the product in particular amounts and claim 6 that the product is a food product.; However, it is well known to use tomato based products in numerous products such as soups, and sauces.; Particular amounts are seen as being

within the skill of the ordinary worker.; Certainly, if the carrots of the reference will thicken tomato sauce, the entire composition will continue to thicken other products. ; Therefore, it would have been obvious to use the claimed product in products which need to be thickened in particular amounts.

Applicants respectfully traverse.

The present invention as set forth in claims 1-6 relates to a process for thickening a product by adding a mixture of PME-deactivated and non-PME deactivated vegetables or fruits to the products. The terminology used in claim 1 may be found in the Specification at page 3, lines 4-23. The present invention seeks to provide an alternative and improved fruit- or vegetable- based thickening agent and a cheap and/or easy process for thickening products which partially or completely replaces the need to use other thickeners such as starches or gums.

Belmar, et al. relates to one of the goals of the present invention: thickening liquid and pourable food products and avoiding or reducing the need for gums and starch. However, the approach in Belmar et al. is entirely different from the present invention. Indeed, vegetable products are also chosen, but thickening is not obtained by combining PME-deactivated and PME-active vegetable matter. Such combination of PME-deactivated and PME-active vegetable is neither disclosed nor suggested nor rendered predictable by Belmar et al. (the text and examples are silent on this). Belmar et al. rely on different properties of certain vegetable matter, which properties are brought to life by subjecting certain vegetable matter to high pressure homogenization. The examples disclose compositions in which either all vegetable matter is PME-deactivated (by heating the final composition) or compositions in which all vegetable matter is PME-active. Consequently, the presently claimed subject matter cannot be obvious over Belmar et al., and its deficiencies are not cured by Belmar, et al.

The secondary reference, Mersfelder et al., provides a way to gel tomato paste, by partial deactivation of allium or onion compositions which are added to it. The present invention not only provides an alternative to such, but also a more practical method. Partial deactivation is difficult to achieve, as it requires careful control of temperature in heat-deactivation. The present method does not require such partial deactivation, but two portions, of which one can be subjected for full-deactivation, and one portion does not need to be subjected to any deactivation step at all. Such is easier to achieve.

Additionally, Mersfelder et al. only describes thickening of tomato paste. It is known to a person of ordinary skill in the art that tomato contains much pectin itself (which is known for its thickening effect), and thus to one of skill in the art, it is not at all predictable that the teaching of Mersfelder et al. can be applied to liquid or pourable matter that does not necessarily contain pectin.

The Office Action position notwithstanding, the references do not disclose or make predictable to one skilled in the art to use the claimed ratios of first and second portion as specified in claims 1 and 2. These ratios are important. Depending on the weight ratio of first and second portion, the properties of the resulting mixture vary. For example, the higher the weight ratio of the PME-deactivated portion of the mixture, the smoother the texture and the sweeter its taste. If on the other hand, the weight ratio of the second portion (the non-PME-deactivated part of the mixture) is increased, the mixture gets a more particulate and pulpy texture. See Specification pp. 9-10.

The combination of Belmar et al. and Mersfelder et al. does not render the present invention obvious. Belmar et al. uses a different process; while the process of the present invention is easier to use than the partial deactivation of Mersfelder et al. Additionally, one skilled in the art would not find it predictable that liquid or pourable compositions (e.g. foods) than themselves do not contain pectin can be thickened using PME-deactivated with PME-active fruit or vegetables.

Consequently, the presently claimed subject matter is not obvious over Belmar et al. in view of Mersfelder et al.

### **CONCLUSION**

Reconsideration of the rejection is respectfully requested in view of the above claim amendments and remarks. It is respectfully requested that the application be allowed to issue.

If a telephone conversation would be of assistance, Applicant's undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

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